

A synchronous digital multiplex transmission apparatus judges whether a received signal is a SONET AU-3 mapping signal or a SDH AU-4 mapping signal, based on values of H1, H2 and H3 bytes which form H bytes, and carries out an AU-3 pointer process in the case of the AU-3 mapping signal and an AU-4 pointer process in the case of the AU-4 mapping signal, with respect to the received signal. A pointer value is inserted in each of the H1, H2 and H3 bytes in the case of the AU-3 mapping signal and a pointer value is inserted in the H1 bytes in the case of the AU-4 mapping signal, with respect to a transmitting signal.

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